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# Recommendations of the Working Group on the Evaluation Framework of the IARC Medium-Term Strategy (MTS) 2021–2025 and its Key Performance Indicators (KPIs)

Quote from WHO Director-General Dr Tedros Adhanom Ghebreyesus: "We must be able to measure progress to make progress. (...) Reliable data is the best way to coordinate response efforts and improve health in all areas."

## Background

In May 2021, the Governing Council adopted the IARC <u>Medium-Term Strategy</u> (MTS) for 2021–2025. This strategy is based on the <u>IARC Statute</u> and the objective that has guided the Agency's activities since 1965: *to promote international collaboration in cancer research*. The MTS is a reference document that provides guidance on IARC's priorities over the next five years, with a view to ensuring that the Agency's activities have a significant and sustainable impact on the global burden of cancer and, ultimately, on the life and health of the world's citizens.

As the cancer research agency of the World Health Organization (WHO), IARC is focused on cancer prevention research. In that context, the vision of the MTS 2021–2025 is to contribute to *a world where fewer people develop cancer*, which means that IARC will enhance global understanding of causes of cancer, their respective pathways, and potential prevention measures. The action plan of the MTS 2021–2025 will contribute to consolidate the position of IARC as the global leader in cancer prevention research, as the global hub for open science in cancer prevention, and as a recognized United Nations (UN) agency for capacity-building and public health impact.

The MTS 2021–2025 presents IARC's strategic priorities, focusing on four *fundamental priorities* for cancer prevention research: Data for Action (to describe the occurrence of cancer), Understanding the Causes (to identify cancer risk factors), From Understanding to Prevention (to effectively implement cancer research), and Knowledge Mobilization (to share knowledge about cancer). The four fundamental research priorities are represented by the four IARC scientific Pillars. IARC will also invest in three *emerging priorities*, with a stronger emphasis on implementation research; Evolving Cancer Risk Factors and Populations in Transition, Implementation Research, and Economic and Societal Impacts of Cancer. The MTS translates into the IARC Project Tree, which organizes IARC's activities according to projects and the related budget, to ensure proper management of the project portfolio (see Annex 2, on page 72 of the <u>MTS</u>, for the IARC Project Tree).



In May 2021, the Governing Council requested the Secretariat to define a conceptual framework to assess progress in the implementation of the MTS 2021–2025. This work requires defining methodologies to measure the implementation of the new MTS and making available a framework of indicators to assess the Agency's progress in attaining the strategic objectives defined in the MTS.

This document outlines the proposed approach and defines the MTS evaluation framework and the proposed key performance indicators (KPIs) that will enable the monitoring and evaluation of the implementation of the MTS 2021–2025. By means of this evaluation framework, the Director will prepare a report on progress in the implementation of the MTS 2021–2025, including a series of case studies illustrating the main achievements in each of the MTS priorities, complemented by quantitative data on the proposed indicators. It is proposed that a dedicated working group will review the Director's report on the evaluation of the MTS 2021–2025 and provide its recommendations to the Scientific Council in February 2025 and to the Governing Council in May 2025.

Therefore, this document has two parts:

- the rationale and the methodology for the evaluation of the implementation of the MTS, and
- the architecture of the evaluation framework and the proposed KPIs to assess progress in the implementation of the MTS.

# **1.** Rationale for the development of the MTS evaluation framework

# 1.1 Preparation and process for the evaluation of the implementation of the MTS

The evaluation of the MTS constitutes the systematic and objective assessment of IARC's strategic programme for 2021–2025: its design, implementation, and results. The aim of this evaluation is to determine the relevance and the fulfilment of the objectives, as well as the development efficiency, effectiveness, and impacts of IARC's activities. This evaluation of the MTS will provide reliable and useful information, which will serve as a basis for IARC to adapt its decisions and to share lessons for the next MTS. This global evaluation of the implementation of the MTS is complementary to the scientific evaluations of individual Branches, which take place every five years, through a peer-review process.

The evaluation of the MTS 2021–2025 is a five-year process, i.e. it occurs over the whole duration of the implementation of the MTS:

- In 2021, the evaluation framework and KPIs were defined, for discussion by the Scientific Council and for approval by the Governing Council in 2022.
- In 2023, case studies will be prepared, and an evaluability assessment will be performed, to determine the readiness of the MTS for the evaluation.
- In 2024, the evaluation of the MTS 2021–2025 will be conducted, and its contents will feed into the development of the MTS 2026–2030 to be defined the following year.
- The evaluation of the MTS 2021–2025 will be submitted for discussion by the Scientific Council and for approval by the Governing Council in 2025. The MTS 2026–2030 will be presented to the governance of IARC in 2026.

To prepare this evaluation framework, an extensive literature review of documentation on health policy evaluation was conducted to identify the most appropriate methodology for the evaluation of the MTS 2021–2025. Interviews were conducted with employees and experts who were involved in the development of the MTS 2021–2025, the management of the Agency, the Chairpersons and Vice-Chairpersons of the IARC Scientific Council and Governing Council, and staff in the WHO Evaluation Office.



# Timeline for the evaluation of the MTS 2021–2025

In May–July 2021, a technical working group composed of IARC personnel proposed a draft of the MTS evaluation framework, with support from the WHO Evaluation Office (Dr Robert McCouch). In September–November 2021, a strategic working group composed of members of the Scientific Council (Dr Luis Felipe Ribeiro Pinto and Dr Mathilde Touvier) and the Governing Council (Dr Yui Sekitani) prepared the document discussed at the 58<sup>th</sup> Session of IARC Scientific Council in February 2022 and document GC/64/13 now incorporates recommendations from the Scientific Council.

Because IARC is the cancer research agency of WHO, the current approach also takes into consideration the UN monitoring and evaluation models for the Sustainable Development Goals (<u>SDGs</u>) and IARC's contribution to the achievement of Target 3.4 of the SDGs: "By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment, and promote mental health and well-being." The current approach also anticipates the implementation within WHO of the scorecard method, to measure the delivery of outputs of the Thirteenth General Programme of Work 2019–2023 (<u>GPW 13</u>).

To ensure that the MTS evaluation framework covers all the dimensions of the IARC MTS 2021–2025, the logic model shown below was developed. This logic model summarizes, in a graphic representation, the vision and the priorities for 2021–2025 and the relationships among the resources, activities, outcomes, and impacts of the five-year programme.



Logic model of the IARC MTS 2021–2025

This approach also refers to a conceptual framework for the evaluation of public policy known as the "IOOI" model: inputs, outputs, outcomes, and impacts. This methodology analyses the programme as a value chain and considers the relationships among its components, to achieve public health impacts. The definition of the methodology and the reasons for choosing the "IOOI" model for the evaluation of the implementation of the MTS are detailed below.

# 1.2 Methodology for the evaluation of the MTS

The impact pathway in part 1 (Vision and Mission) of the MTS (see the Appendix to this document) describes how IARC will further strengthen its impact by placing more emphasis on implementation research, driven by feedback from cancer control interventions as well as global public health and economic priorities.

In that context, the methodological framework for the evaluation of the MTS 2021–2025 relies on *the theory of change*. This methodology explains how a particular intervention leads to the intended results and ultimately contributes to the intended impacts. To prepare for the evaluation of the MTS, the theory of change provides a framework to model how short-term changes lead to long-term public health impacts in cancer prevention. This approach includes an increased consideration of health behaviours and access challenges, such as in screening programmes.

This MTS impact pathway perfectly illustrates linkage based on the theory of change, with the causal linkage between Inputs, Outputs, Outcomes, and Impacts. To represent the architecture of the MTS evaluation framework, a short definition of the "IOOI" model is provided below, taken from the UN results-based management methodology.

IOOI methodology: UN definition				
INPUTS	Human, financial, technological and information resources used to achieve results.			
OUTPUTS	Specific goods and services produced by the programme. Outputs can also represent changes in skills or abilities or capacities of individuals or institutions, resulting from the completion of activities within a development intervention within the control of the organization.			
OUTCOMES	The intended changes in development conditions resulting from interventions. They can relate to changes in institutional performance. Outcomes are the collective strategic results for the United Nations system cooperation at country level, intended to support national priorities.			
IMPACTS	Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.			
Source: Results-Based Management in the United Nations Development System, 2016				

The UN result-based management methodology also recommends defining indicators and KPIs to ensure proper monitoring and evaluation of the MTS. Indicators include quantitative or qualitative variables that provide a simple and reliable way to measure the implementation of the MTS 2021–2025. Each category of indicators refers to the main ambitions of the MTS 2021–2025. Those indicators cover the four dimensions of the MTS evaluation framework (inputs, outputs, outcomes, and impacts), to match with the MTS impact pathway to address the global cancer burden.

The MTS evaluation framework also includes KPIs, which are metrics that show the performance related to the Agency's strategy and that are considered particularly critical for the success of IARC's mission. Effective KPIs must be SMART: specific, measurable, attainable, realistic, and time-bound. The UN gives a more precise definition of KPIs in the monitoring framework for the SDGs, based on the 10 criteria shown below.

Ten principles for global monitoring indicators			
Ten principles	<ol> <li>Limited in number and globally harmonized</li> <li>Simple, single-variable indicators, with straightforward policy implications</li> <li>Allow for high frequency monitoring</li> <li>Consensus based, in line with international standards and system-based information</li> <li>Constructed from well-established data sources</li> <li>Disaggregated</li> <li>Universal</li> <li>Mainly outcome-focused</li> <li>Science-based and forward-looking</li> <li>A proxy for broader issues or conditions</li> </ol>		
Source: SDSN, Indicators and a Monitoring Framework for Sustainable Development Goals: Launching a data revolution for the SDGs, 2015			

In the MTS evaluation framework, KPIs are complemented by case studies to provide additional qualitative information about the implementation of the MTS 2021–2025. Indicators, KPIs, and case studies of the MTS evaluation framework will enable performance monitoring of the MTS, through a continuous process of collecting and analysing data and information generated by the 2021–2025 programme. This process will enable the assessment of the implementation of the MTS and of progress in the four dimensions of the MTS evaluation framework. The MTS evaluation framework also serves as a management tool. It will help define personal performance indicators, based on the work plans of the MTS 2021–2025.

The main sources for the collection of indicators and KPIs are mentioned in the MTS evaluation framework. IARC has limited resources to dedicate to the collection and analysis of inputs, outputs, outcomes, and impacts. Therefore, the measures incorporated into the framework are those that can already be captured routinely, supplemented by some additional indicators that can be collected for a modest investment and will provide important information value for the implementation of the MTS.

# 2. Evaluation framework and proposed KPIs to assess progress in the implementation of the MTS

#### 2.1 Structure of the MTS evaluation framework

The architecture of the MTS evaluation framework was defined with four categories of indicators and KPIs for each of the four dimensions of the framework (inputs, outputs, outcomes, and impacts). These categories of indicators and their contents were inspired by the methodological frameworks developed by:

- the United States Centers for Disease Control and Prevention: *Measuring What Matters in Public Health* (Washington DC, USA, 2018), and
- the Canadian Academy of Health Sciences: Making an Impact: A Preferred Framework and Indicators to Measure Returns on Investment in Health Research (Ottawa, Canada, 2009).



This MTS evaluation framework provides quantitative indicators and also qualitative indicators. Most of the quantitative indicators are part of the inputs and outputs, and the qualitative indicators appear mainly in the outcomes and impacts. A list of case studies that will be prepared during the evaluation of the MTS was defined with the scientific coordinators of the IARC Pillars. Those case studies, detailed in the figure below, cover the six main Level 2 Objectives of the IARC Project Tree (see Annex 2, on page 72 of the <u>MTS</u>).



# 2.2 Proposed indicators and KPIs for the evaluation of the MTS

		INPUTS			
What are the quantity and quality of the resources invested in the implementation of the MTS? Are they relevant according to IARC's ambitions?					
Category of indicators and sources	Main ambitions of the MTS	Main indicators	Key performance indicators		
GOVERNANCE (Source: DIR, SSR)	Recruitment of new Participating States	<ul> <li>Activities with current Participating States</li> <li>Actions to integrate new Participating States</li> </ul>	<ul> <li>Integration of new Participating States</li> </ul>		
BUDGET (Source: DIR, SSR)	<ul> <li>Budget increase: 25% in 10 years</li> <li>Diversification of resources</li> <li>Increase of extrabudgetary funds</li> <li>Innovative resource mobilization</li> </ul>	<ul> <li>Evolution of direct funding</li> <li>Evolution of voluntary contributions</li> <li>Evolution and proportion of grants, donations, legacies, fundraising, and grants with IARC as Principal Investigator or Work Package/task leaders</li> <li>Competitive grants: volume, number of funders, contracts, success rates on calls (compared with average success rates)</li> <li>Analysis of grants: % for IARC staff, % for IARC Early Career and Visiting Scientists (ECVS), % for low- and middle-income country (LMIC) partners, % for low-income country partners</li> </ul>	<ul> <li>Evolution of total and regular budget</li> <li>Number and evolution of funders</li> <li>Resource mobilization and fundraising (case study)</li> </ul>		
WORKFORCE (Source: HRO)	<ul> <li>Attraction and building of talents</li> <li>Well-balanced geographical representation</li> <li>Equal treatment of all personnel regardless of race, gender, disability, religion or belief, sexual orientation, and age</li> </ul>	<ul> <li>Number, distribution, and evolution of staff members</li> <li>Number, distribution, and evolution of ECVS</li> <li>Staff turnover and comments per personnel category</li> <li>Report of the IARC Equity and Diversity Advisory Group (EDAG) of IARC referring to the WHO Diversity, Equity and Inclusion (DEI) Initiative</li> </ul>	<ul> <li>Gender balance at management level (Branch Heads and Deputy Branch Heads)</li> <li>Geographical diversity a cross the Agency and at management level</li> </ul>		
INFRASTRUCTURE (Source: ASO)	<ul> <li>IARC's new building (Nouveau Centre) in Gerland</li> <li>Support of the laboratories and biobank's sustainability</li> <li>Digitalization, open science and data</li> </ul>	<ul> <li>New-generation biobank and laboratories in the Nouveau Centre</li> <li>Implementation of the IT roadmap (Enterprise Resource Planning and Scientific IT Platform)</li> </ul>	<ul> <li>Nouveau Centre in Gerland – investment and operating costs (case study)</li> <li>Implementation of the IARC Data Protection Policy</li> </ul>		

#### OUTPUTS What has been done and produced according to the MTS action plan? Are these outputs aligned with IARC's priorities? Main ambitions of the Category of Main indicators Key performance indicators and MTS indicators sources PUBLICATIONS Promotion of SWOT analysis of the 5-year Number and (Source: PLW) scientific excellence Branch reviews evolution of in cancer prevention Evaluation of IARC's contribution publications Collaborations in the form of publications, taking Number and between disciplines into account the DORA and evolution of □ Implementation Leiden guidelines publications per research Manuscripts based on IARC scientific staff and grants per funders FCVS List of key publications per Pillar h-index overall and and selection of the 5 most per Pillar relevant per Pillar, including comments on their scientific, public health, and societal impacts LEARNING EVENTS □ Training of the next Courses organized by IARC, and Attendees of AND COURSES generation of courses held in LMICs courses. and Number and distribution of (Source: LCB) scientists attendees from □ Support of capacityparticipants, including from LMICs building in LMICs Participating States Available training materials н. Collaborations with the WHO Academy Diversification of training materials (digital interactive tools, webinars, etc.) TRAINING AND Training of the next Number and distribution of Number of ECVS **FELLOWSHIPS** generation of fellowships (IARC Fellowships and overall and from scientists other fellowships) (Source: LCB) LMICs Support of capacity-Number and building in LMICs distribution of IARC Fellowships overall and from LMICs IMPLEMENTATION Reduction of Reduction of work travel Monitoring of carbon • OF MTS ecological footprint (avoidable working trips), footprint (Source: DIR, SSR) ("green" research) teleworking, e-learning or Compensation Digital transformation blended learning, hybrid meetings programme for for governance, reduction of international travel energy consumption, paperless work

# OUTCOMES

#### What progress has IARC made towards achieving the objectives of the MTS? What are the results for stakeholders?

Category of indicators and sources	Main ambitions of the MTS	Main indicators	Key performance indicators
PARTNERSHIPS AND INTERNATIONAL COLLABORATIONS (Source: DIR, SSR)	<ul> <li>Establishment of partnerships</li> <li>Engagement with UN agencies</li> <li>IARC as the leading global cancer authority</li> </ul>	<ul> <li>MoUs and agreements with research institutes, nongovernmental organization, patient organizations, companies, national cancer centres and health authorities, etc.</li> <li>Cooperation with UN agencies (UNSCEAR, UNEP, UNFPA, IAEA)</li> <li>Cooperation with UICC</li> </ul>	<ul> <li>International and national MoUs, MoAs, CRAs, etc., and international consortia (applications and grants)</li> <li>International team with Japan (case study)</li> <li>International publications with co- authorship</li> </ul>
CAPACITY-BUILDING (Source: CSU, LCB)	<ul> <li>Support of capacity- building in LMICs</li> <li>Training of trainers and cancer leaders</li> </ul>	<ul> <li>Expertise missions for governments and contribution to guidelines</li> <li>Support to research infrastructure and governance</li> <li>BCNet programme (case study)</li> <li>Sponsorship of local fellows through IARC grants</li> <li>Coordination role in consortia</li> </ul>	<ul> <li>Summer School and ECVS outcomes surveys</li> <li>Global Initiative for Cancer Registry Development (GICRNet Training of Trainers) (case study)</li> </ul>
DISSEMINATION AND VISIBILITY (Source: PLW, COM)	<ul> <li>Sharing knowledge and scientific evidence</li> <li>Dissemination of information</li> <li>Presence in media, on the web and social media</li> </ul>	<ul> <li>Access to online tools and databases</li> <li>Traffic and downloads on IARC website</li> <li>Amount of sales of IARC publications</li> <li>Lectures given to public audiences</li> <li>Oral presentations for scientific conferences, for state actors or international organization events (governments, EU, WHO, etc.)</li> <li>Media coverage</li> </ul>	<ul> <li>Printed publications and e-publications as public goods</li> <li>Media releases and social media presence</li> <li>Organization of scientific conferences and events and oral and poster presentations by IARC scientists at congresses and invited conferences</li> </ul>
OPEN SCIENCE (Source: SSR, GEM)	Open Access as cornerstone of Open Science	<ul> <li>Development of data analysis tools, with open-source code</li> <li>Data sharing on the Scientific IT Platform in line with <u>FAIR</u> principles</li> </ul>	<ul> <li>Open access publications</li> <li>Scientific IT Platform (case study)</li> <li>Open access biobank (case study)</li> </ul>

#### IMPACTS

## What are the long-term, sustainable changes in cancer prevention that are attributable to the MTS?

Category of indicators and sources	Main ambitions of the MTS	Main indicators	Key performance indicators	
COOPERATION WITH WHO ON IMPLEMENTATON (Source: ESC, CSU, PLW, ENV, EPR)	<ul> <li>Common strategy with WHO NCDs department</li> <li>Support of WHO normative work</li> <li>Establishment of a formal engagement structure (IARC, WHO headquarters and regional offices)</li> </ul>	<ul> <li>Actions with WHO headquarters</li> <li>Actions with WHO regional offices</li> <li>Contribution to WHO guidelines or policy briefs</li> <li>IARC-WHO co-publications</li> </ul>	<ul> <li>High-level oversight committee and implementation committee</li> <li>Contribution of IARC Handbooks to prevention policies (case study)</li> <li>Contribution to the three WHO global initiatives (case studies)</li> </ul>	
PREVENTION POLICIES (Source: ESC, CSU, PLW, ENV, EPR)	Translation of IARC's scientific production into WHO public health prevention policies	<ul> <li>Production of IARC Evidence Summary Briefs. Expertise missions. Contribution to WHO guidelines or policy briefs</li> <li>Citations in public health policy documents (Altmetric/Google Scholar)</li> </ul>	<ul> <li>Contribution of IARC Monographs programme to prevention policies (case study)</li> <li>Codes Against Cancer (case study)</li> <li>Documentation on primary prevention a dvoca cy</li> </ul>	
CLINICAL PRACTICES (Source: CSU, ESC)	Translation of IARC's scientific publications into clinical practices	<ul> <li>Research on cancer survival (SURVMARK-2)</li> <li>Research on patterns of care in cancer</li> <li>Number and scientific production of research programmes on secondary or tertiary cancer prevention and cancer survival</li> </ul>	<ul> <li>Contribution of tumour classification programme and scientific production to clinical practices (case study)</li> </ul>	
ECONOMIC AND SOCIETAL IMPACTS (Source: CSU, other Branches)	Integration of economic and societal impacts into IARC programmes and studies	<ul> <li>3 emerging priorities</li> <li>Contribution of teams related to emerging priority number 3</li> <li>Integration of economic indicators into the Global Cancer Observatory database</li> <li>Number and scientific production of research programmes on the reduction of health inequalities in cancer prevention</li> </ul>	<ul> <li>Teams: Health economics and cancer, Cancer inequalities (case study)</li> </ul>	

#### 3. Appendix: MTS impact pathway

